



Aerospace Education

July - August 2008

News

Inspiring Students To Excel

Berlin Airlift



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Aerospace Education News

Aerospace Education News is the official aerospace education bimonthly publication of the Civil Air Patrol at CAP National Headquarters, Maxwell Air Force Base, Ala.

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If you have news, events, or ideas we might consider for the newsletter, please submit them electronically to jstone@cap.gov.

Celebrating Uncle Wiggly Wings and The Berlin Airlift - 60 Years

As we remember the sacrifices made for us by our military men and women, we also celebrate their indomitable spirit. Such spirit can best be exemplified by the many acts of kindness that are shown every day in countries around the world.

At this time, we remember and celebrate the humanitarian act known as the Berlin Airlift. After World War II, United States and United Kingdom aircraft supplied Berlin with necessities from food to coal to help them start to recover from the ravages of war.

One shining moment in the airlift was when a young 1st Lt named Gail Halvorsen decided the children of Berlin were in need of a little hope. He made tiny parachutes out of handkerchiefs and tied candy and gum to them. He then dropped them from his airplane to the children of Berlin. The way the children knew his airplane from the many airplanes flying over their city each day was that he would wiggle his airplane wings before he dropped the candy parachutes to them.

Once this operation got out to his superiors, Halvorsen was reprimanded for not getting his project approved before proceeding. However, the airlift commander, General William Tunner, approved the continuation of "Operation Little Vittles," as it became known, and handkerchiefs were donated by all those at Halvorsen's home base. In addition, the American

Confectioners Association donated tons of candy for the cause. The candy was sent to Westover Air Force Base in Chicopee, Massachusetts, where local school children assembled the candy parachutes and sent them to Germany.

By January 1949 some 250,000 parachutes had been dropped over Berlin, and the operation helped reassure citizens that the West would not abandon them. As one young

Berliner later told Halvorsen, "It wasn't [just] chocolate. It was hope."

So, as we stop to remember the best of the worst of times, we can be proud to say that United States service men and women were and are still bringing hope to the world.



Uncle Wiggly Wings (Col Gail Halvorsen) prepares parachutes for the children of Berlin.



In the Spotlight: Jr. Cadet Prototype Program End-of-Year Review



The October 2007 "Lift-off Celebration" in Boaz, AL, marked the beginning of the Jr Cadet program for 23 elementary schools across America.

End-of-year surveys revealed that participation in the program improved collaboration of school staff. Community collaborative efforts emerged in some schools wherein parents, community leaders, Air Force Association (AFA) chapters, and CAP

members partnered with the teachers to provide program delivery and mentorship. In turn, the school staff and students reciprocated by doing community service projects for the organizations assisting them in their Jr Cadet program.

Teachers reported that the lessons supplemented their curricula very nicely and that the students enjoyed participating in the inquiry-based, interactive

lessons. Lesson evaluations revealed an average score of 4.33 out of a possible 5 for lesson quality and applicability.

The prototype program will be continued next year for the same schools. In addition, over 50 other schools nationwide have requested the curriculum. For more information, contact Susan Mallett at smallett@cap.gov.

In the Spotlight: National Jr Cadet Award Winners

Jr. Cadet of the Year for Grades K-2: Jarrett Glover



Jarrett Glover, 2nd grade student at Thomas Creighton Elementary School, Philadelphia, PA; Teachers- Mary Collins and Jen Gallagher; Principal- Katherine McKellar-Carter --- Jarrett is a role model to students in his school with his excellent behavior and school work; he is prompt; poised and prepared. Jarrett is now marching in the CAP Color Guard, but his snare drum and harness are heavier than he is! When he is marching and playing the drum, he is proud to be in the Civil Air

Patrol. Jarrett was presented his trophy and medal by CAP-USAF Commander, Col Russ Hodgkins, from Maxwell AFB, AL..



Jr. Cadet of the Year for Grades 3-6: Rebecca Phisted

Rebecca Phisted, 5th grade student at Central Fellowship Christian Academy, Macon, GA; Teacher- Katherine Prettyman---Rebecca displayed enthusiasm, creativity, and obvious interest

in each Jr Cadet lesson. Her sense of patriotism and exuberance was a source of inspiration for her classmates. "Becca" planted flowers and shrubs at the Methodist Children's Home and made blankets for "Project Linus." Becca was presented her trophy and medal by her principal, Miriam Rearden, and the GA 808 Commander, and school Jr Cadet Coordinator, Capt Jim Flaviani.



Jr. Cadet Class Service Project of the Year: 2nd Grade - Creighton Elementary School

Second Grade- Thomas Creighton Elementary School, Philadelphia, PA; Teachers- Ms Mary Collins and Ms Jen Gallagher; Principal- Katherine McKellar-Carter ---Two service projects

were completed: mentorship to kindergarten students for the Jr Cadet program; and, as shown in the photo, completing a mutually-beneficial partnership with the senior citizens at the Philadelphia Protestant Home. The teachers were presented their award by

CAP-USAF Commander, Col Russ Hodgkins, from Maxwell AFB, AL.



In the Spotlight: National Jr Cadet Award Winners

Jr. Cadet Coordinator of the Year: Lynn Toney



Lynn Toney, Gifted Specialist at Boaz Intermediate School, Boaz, AL; Principal- John Beck---Lynn coordinated the Jr Cadet program for the entire Boaz School System. She managed the three schools and worked with the middle and high school cadets, as well. She organized the national Jr Cadet "Lift-off Celebration" for over 2500 people, coordinated Fly-a-Teacher flights, and partnered cadets with Jr Cadets during the year. All of her schools completed all requirements

for the Jr Cadet program evaluation. Ms Toney will be presented her award by the National Commander at the CAP National Conference in August.



Jr. Cadet Teacher of the Year: Mary Gurley

Mary Gurley, Kindergarten Teacher and Jr Cadet Coordinator at Taylor Road Academy, Montgomery, AL; Principal- Janine Brouillette---Mrs. Gurley fulfilled every aspect of the Jr Cadet program. She involved the school principal and secretary, students' parents, and local CAP members in the delivery of the program. She received media coverage for the program over 20 times throughout the

year. She planned a school-wide "Lift-off Celebration" wherein every grade level demonstrated an aerospace flight principle via a variety of flying machines, organized a Fly-a-Teacher Day, and ensured all program requirements were fulfilled for her school. Mrs. Gurley will receive a trip to tour Kennedy Space Center and Cape Canaveral courtesy of the Air Force Association- Montgomery Chapter. Mrs. Gurley was presented her award by the CAP Interim National Commander, Brig.Gen. Amy Courter, at the CAP Headquarters.



Brig. Gen. Amy Courter (right), Interim CAP National Commander, presents plaque to Mary Gurley (left).

Jr. Cadet School of the Year: Christ the King Catholic School

Christ the King Catholic School, Jacksonville, FL; Jr Cadet Coordinator, Carla Chin; Principal- Stephanie Chinault--- The school received media coverage for their efforts initiating the program beginning with a "Lift-off Celebration." All CAP teachers fulfilled the entire scope of the program. 98% of all students completed the program with an average of 25% growth in AE

knowledge. Their favorite lesson: parachutes and parafoils. The school donated canned goods to the St. Vincent DePaul Food Bank each month. CAP volunteers assisted in implementing the lessons and planned a Fly-a-Teacher Day. The school also recruited a school for special needs students to become a Jr Cadet school. The school's coordinator, Carla Chin, will attend a tour of Kennedy Space Center, meeting astronauts and collecting educational materials for her school.



Jr. Cadet School Service Project of the Year: Zion Chapel School

Zion Chapel School, Coffee County, AL; Jr Cadet Coordinator- Christina Kirkland; Principal- Mr. Hartwell; Service Project Coordinator- Shirley Goodson---Teachers, staff, and students invited their families and community members to "Rally Together for the Relay for Life" for the American Cancer

Society. Students sold stars, moons, and luminaries in memory and in honor of those with cancer or those who lost their battle with cancer. Each grade level, and faculty, staff, lunch-room workers and bus drivers each had a special fundraising project. For raising over \$10,000, the school was presented their award by CAP National HQ staff.





In the AEO Spotlight.....

1LT Sue Kristoffersen



1LT Sue Kristoffersen (AEO for TX 371 in Texas Wing) tackles aerospace education with the same vim and vigor that she tackles grandmother-hood. She joined CAP one year after her grandson, Michael Moody, joined as a cadet. Being a grandmother of six, Sue has used her entertaining talents and professional expertise to motivate and keep the cadets in her squadron interested in aerospace and robotics. She joined with the sole intent of supporting the cadets of the Apollo Composite Squadron. This support has turned into the Apollo Robotics project.

Sue Kristoffersen and her cadet team have participated and won first place in a Robotics Design contest. They were able to do a great deal of research-related field trips around the theme of Alternative Energy. Touring several power plants in the Austin area, they marveled at the technology and engineering ideas that were presented at each plant. With the help of other Senior Members in the squadron, the Apollo Robotics project was a success and the cadets learned some real-world engineering applications. Her teams have participated in and won such robotics events as Robofest and First Lego League robotics. This year they will participate in the Lego Sumobot competitions with three teams of varying ages.

Being a Cobol Programmer for the State of Texas for over 26 years, Sue Kristoffersen is dedicated to her profession and this carries over to her role in Civil Air Patrol. Sue

goes above and beyond what is asked of her to make the AE experience as meaningful for her cadets as possible. She has done such activities as working air shows, outreach visits involving hands-on hovercraft rides, flight marshaling, helicopter landing zone training, robotics training for competition, and completion of the Aerospace Education Excellence (AEX) Program. Not only has Sue Kristoffersen offered her services to the AE program, she has also provided leadership and expertise working with the squadron's cadets. Her work with youth also involves community service such as working with Boy Scouts and helping Texas flood victims. She is truly an active community volunteer.

Sue Kristoffersen earned her Yeager Award in October of 2007 and is constantly learning and improving her skills in aerospace education and other CAP missions. Her photographic skills have been helpful in publishing articles about the Apollo Squadron. Sue Kristoffersen's latest accomplishment was to be presented the Regional Brewer Award in April at the Texas Wing Conference. At this conference, she and her cadets wowed the audience, including Brig. Gen. Courter, with several robots including one that launches model rockets!

We thank Sue Kristoffersen for her selfless devotion to young people and CAP. We wish her the best as she continues to "wow" us with her future endeavors.



Sue Kristoffersen (middle back) and her cadets working with robotics.

"Keep them busy, and energized. Tote, haul, feed, and expose them to everything wonderful I can find and afford."

*--Sue Kristoffersen
(talking about her cadets)*



AEO/AEM News and Views

AFA continues to provide outstanding support to Civil Air Patrol and aerospace education. AFA has now given CAP over \$250,000 in \$250 aerospace grants that have been used to promote aerospace education in CAP squadrons and in the classrooms of America. The next grant cycle is for educators and the deadline for submission of the application is **September 30, 2008**. Go to www.cap.gov/ae for an application.

If you have any questions, please contact jstone@cap.gov or jmontgomery@cap.gov.

National Board and AE 2008

AE Pre-Conference Workshop will be held on August 6 at the Gaylord Palms in Kissimmee, Florida. On August 5, AE will host a Fly A Teacher Orientation Flight Seminar for our educator members. You must be an AEM to participate in the Tuesday flight. On Wednesday, be prepared to spend a full day with exciting, hands-on aerospace activities with your AE team. For

more information and to register, go to www.cap.gov or email ae@cap.gov.

Another highlight for our members at this year's conference is the *NASA Smart Skies* program. NASA's *Smart Skies* involves learning to solve realistic air traffic control (ATC) problems using an interactive simulator and math. It is designed for grades 5-9. For a hands-on demonstration, stop by the *Smart Skies* booth in the exhibit hall. For an in-depth demonstration and explanation, participate in the *Smart Skies* segment of the AE workshop.

Aerospace Education Days Across the Nation.....



Montgomery AFA Aerospace Day at Maxwell AFB, Alabama. Jr Cadet students listen to Wilbur and Katherine Wright talk about Maxwell's role in the first flight school.



Aerospace Days at Southeast Elementary in Yoder, Wyoming. Students landing an airplane.

--Picture and activities for this day provided by Susan McDonald (WY WG DDRA)



Aerospace Education Day in Green Bay, Wisconsin. Sponsored by WI-197, WI-169, and WI 055. A young visitor tries her hand at a C-172 using Microsoft Flight Simulator at AEX Activity Day.

Picture and information: Peter Sherrill (AEO Northeast Group 203 and WI -197)



CAP mentors future engineers at Leslie Middle School in Oregon. Information provided by Nick Ham (OR WG DAE)



Cappy greets students at Bear Elementary AE Day - Catherine Kenny, Coordinator.



CURRICULUM CORNER

Build Parachutes with Uncle Wiggly Wings

Objectives:

1. Students will become aware of the humanitarian spirit that can evolve from tragedy.
2. Students will build one or more parachutes that can carry a miniature chocolate candy bar.

National Science Standards:

Content Standard A: Science as Inquiry
• Abilities necessary to do scientific inquiry

- Understanding about scientific inquiry

SOCIAL STUDIES STANDARDS

1. Culture
2. Time, Continuity, and Change
3. People, Places, and Environments
6. Power, Authority, and Governance
9. Global Connections
10. Civic Ideals and Practices

Grade Level: K-5

Materials:

Per student:

- One good-quality dinner napkin
- 4 sticky dots or stickers of some kind
- 4 strings 18 inches in length
- One miniature candy bar
- One paper clip or tape to fasten the strings to the candy bar.

Background:

At the end of WWII, a defeated Germany was divided amongst the victors, the United States, the Soviet Union, Great Britain, and France. The Soviet Union (USSR - Union of Soviet Socialist Republics - divided into Russia and other nations today) took control of the Eastern half of Germany and the Western half was divided amongst the Allied forces of the USA, Great Britain, and France. The city of Berlin was sitting in the middle of the Eastern sector and it was governed by a union of the four powers, called the Allied Control Council. The objective of this council was to control and rebuild the war-torn city of Berlin.

Generally traffic moved throughout the city and much-needed supplies for everyday living for the 2,008,943

Berliners came in without any difficulty. There were many disagreements on the Council as to how the city should be rebuilt. As a result, Joseph Stalin, the leader of the USSR, wanted the US, Great Britain and France out and on the morning of April 9th, 1948, he ordered all American military personnel maintaining communications equipment out of the Eastern Zone. On June 21st, a US military supply train was halted and it was moved back to the Western sector by a Soviet engine. On the 24th of June 1948, all land and water access to West Berlin was cut off by the Soviets. There were to be no more supplies to be moved into Berlin. The Allies were certainly not going to stand for this. Diplomacy failed, ground invasions were planned and World War III was eminent. U.S. military commander, General Lucius Clay, had a plan by which an armed convoy through Soviet-controlled Berlin would break the blockade and this action would almost certainly create a war.

British Commander Sir Brian Robertson offered an alternative plan: supply the city by air. It was determined that the city's daily food ration would be 646 tons of flour and wheat; 125 tons of cereal; 64 tons of cooking fat; 109 tons of meat and fish; 180 tons of dehydrated potatoes; 180 tons of sugar; 11 tons of coffee; 19 tons of powdered milk; 5 tons of whole milk for children; 3 tons of fresh yeast for baking; 144 tons of

dehydrated vegetables; 38 tons of salt; and 10 tons of cheese. In total, 1534 tons would be needed daily to keep over 2 million people alive.

These figures did not include other necessities, like coal and fuel.

Earlier, in 1945, an agreement was made between all of the powers, including the Soviet Union, that three 20 mile-wide air corridors would be established providing access to Berlin. The pact was signed and agreed upon by all the allied powers, including the USSR. When the blockade began, the Soviets thought that surely the U.S., Great Britain and France would leave. They were wrong and on June 26, the first American C-47 Skytrain cargo planes landed at Tempelhof Airport, foreshadowing the great operation that was to come. The great Berlin Airlift began.

This undertaking was commanded by General William H. Tunner. He was known as the "transportation expert to end all transportation experts" by his commander, General Curtis LeMay.



Left: Children awaiting air-lift supplies. Above: Col Gail Halvorsen prepares to drop parachutes with candy attached.

CURRICULUM CORNER

Uncle Wiggly Wings (cont.).....



Life for the people of Berlin was very difficult and had it not been for the Airlift, thousands would have died from starvation and disease.

One of the most poignant stories to come out of the Berlin Airlift was that of 1st Lt. Gail Halvorsen, a pilot for the US Air Force. Lt. Halvorsen had a hobby of making home movies and on one of his days off, decided to visit the city he was saving. At Templehof, he noticed, near the end of one of the main Airlift runways, a group of children watching the planes land. He went over to them and started a conversation. They were especially fascinated with him once they found out he was one of the pilots who was flying in their life-giving supplies. He noticed that they did not ask him for handouts of gum or chocolate. He reached into his pocket and found that he only had two sticks of Wrigley's Doublemint gum. He told them that if they didn't fight over it, he would drop some candy to them, by parachute, the next day when he flew over. They were very courteous and distributed the pieces of gum equally amongst themselves. Before he left, one child asked him how they would know it was him when he dropped the candy. He said, "I'll wiggle my wings!" True to his word, the very next day, on approach to Berlin, he rocked the airplane and dropped some chocolate bars attached to a handkerchief parachute to the children waiting below. Every day, the number of children would increase and he made several more drops. Soon there was a stack of mail at Base Operations addressed to "Uncle Wiggly Wings," "The Chocolate Flyer," and the "Chocolate Uncle." Eventually he was "called on the carpet" by his commander because some local newspaper reporter published a picture of Halvorsen's plane going by with tiny parachutes trailing it. His commander wasn't happy about it, but General Tunner thought it was just the kind of

morale boost that the operation needed. It was eventually dubbed, "Operation Little Vittles!"

The "Operation" continued and over three tons of candy was dropped over Berlin; some even landed in the Soviet Sector. For this simple, kind-hearted gesture, Halvorsen became the most recognized pilot of the Berlin Airlift.

Procedure:

1. Discuss what humanitarian means. (Doing for others without expectation of compensation....giving from the heart.)
2. Ask questions such as: How can this same humanitarian spirit be shared in today's world...What can you do, as young people, to share the spirit of hope with others?
3. Make parachutes with Hershey's miniature chocolate bars attached.



The parachute canopy in the activity is 12" x 12" with 18" lines.

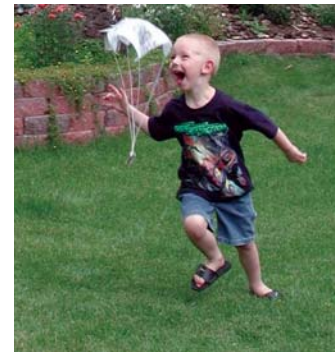


The candy bar is attached end to end so that it hangs straight down from the parachute. A small piece of tape will help keep the candy from separating from the lines.

The string shroud lines are attached to the napkin by 4 sticky dots. The candy can be attached to the string (all pulled together with strings even) by a small paper clip or tape.

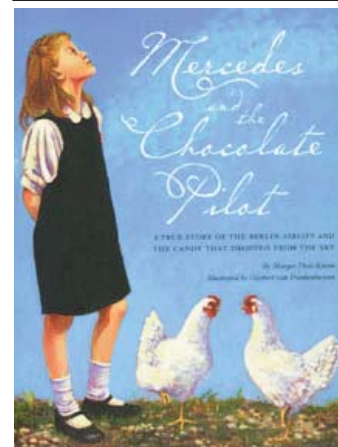
4. A handkerchief with corners tied to the string could also be used and dropped from a higher altitude, such as a stairwell.

5. Consider having older students share parachutes with younger students.



Toss the parachute in the air and watch it descend. You can even time your parachute and your friends' and make a graph to see which did the best!

For enrichment, read *Mercedes and the Chocolate Pilot* by Margot Theis Raven.





REGION TO REGION



NORTHEAST REGION

July 10-13

Hillsborough Balloon Festival and Fair will take place at Grimes Field in Hillsborough, New Hampshire.

<http://www.balloonfestival.org/balloonhome.html>

July 21-22

Passport to the Future Teacher Workshop will be presented by the American Institute of Aeronautics and Astronautics (AIAA) in Hartford, Connecticut.

<http://www.aiaa.org/content.cfm?pag eid=230&lumeetingid=2073>

September 6-7

2008 Westover Air Reserve Base commemorates the 60th Anniversary of the Air Force Reserve with The Great New England Air Show.

<http://www.greatnewenglandairshow.com/>

MIDDLE EAST REGION

September 6

17th Annual Louisa County Airshow will take place at the Louisa County Airport/Freeman Field in Virginia.

<http://www.virginia.org/site/>

October 16-18

National Conference on Aviation and Space Education (NCASE) will be held at the Crystal Gateway Marriott in Arlington, Virginia. Register now for great rates!

<http://www.ncase.info>

GREAT LAKES REGION

July 14-15

Learning Technologies, Inc., invites you to the Digital STARLAB/Starry Night Institute to be held at Malone University in Canton, Ohio. For cost, registration and information, go to:

<http://www.starlab.com/sldsinstituteforms2008.pdf>

July 28 - August 3

Experimental Aircraft Association (EAA) hosts AirVenture in Oshkosh, Wisconsin.

<http://www.airventure.org>

August 30 - September 1

Cleveland National Air Show will be held at Burke Lakefront Airport in Cleveland, Ohio.

<http://www.clevelandairshow.com/>

SOUTHEAST REGION

August 5-9

CAP Summer National Board will hold an Aerospace Education Workshop prior to National Board on Wednesday, August 6 and the Fly A Teacher program will be offered to CAP Aerospace Education Members on August 5. The conference will be held at the Gaylord Palms Resort in Kissimmee, Florida. The National Conference with many learning labs, will be held Friday and Saturday, August 8-9.

http://www.cap.gov/visitors/events/2007_cap_annual_conference/

NORTH CENTRAL REGION

July 19-20

Duluth Airshow will be held at the Duluth International Airport in Duluth, Minnesota.

<http://www.duluthairshow.com/>

SOUTHWEST REGION

July 31 - August 1

Educators Technology Conference (regional for AR, MO, KS, and OK) will be held in Rogers, Arkansas at the John Q. Hammons Convention Center.

<http://users.aristotle.net/~asta/meet.htm>

September 19-21

Plano Balloon Festival will be held at Oak Point Park in Plano, Texas

<http://www.planoballoonfest.org/main.html>

ROCKY MOUNTAIN REGION

August 22-24

Rocky Mountain Balloon Festival will be held at Chatfield State Park in Denver, Colorado.

<http://www.rockymountainballoonfestival.com/>

September 13

Sally Ride Science Festival will be held at the University of Colorado in Colorado Springs, Colorado.

<http://www.sallyridesience.com/festivals>

PACIFIC REGION

July 15-18 and August 12-15

Four-day Aerospace Summer Camps for students in grades 6-12 will be held at the Aerospace Museum of California in McClellan, California.

<http://www.aerospacemuseumofcalifornia.org/education.html>

September 27-28

California International Airshow will be held at Salinas Municipal Airport in Salinas, California.

<http://www.salinasairshow.com/>

Special Events

September 24

Teams of high school students can participate in the Pete Conrad Spirit of Innovation Award. Submissions are due in early 2009. For details, go to:

<http://space.xprize.org/space/pete-conrad-award>

January 16, 2009

Alan Shepard Technology in Education Award recognizes outstanding contributions made by technology personnel or classroom teachers to technology education. Applications must be received no later than January 16. For more, go to:

http://www.amfcse.org/Alan%20Shepard%20Award/alan_shepard_award.htm

July - August

Online training available from NASA for Project 3D-VIEW [Virtual Interactive Environmental Worlds]. To find out more go to

http://www.3dview.org/register_pre.cfm